

IN THE CLAIMS:

1 – 9. (Canceled)

10. (Previously Presented) A method of providing access to stored data, the method comprising:

receiving a read command that comprises a read address;

determining whether data from the read address is buffered in a volatile read buffer;

retrieving data from a location in a nonvolatile memory array associated with the read address if the data is not buffered, and buffering the retrieved data in the volatile read buffer;

responding to the read command with data from the volatile read buffers if the data is buffered;

detecting a pending power-down;

storing in nonvolatile memory the read address for data buffered in the volatile read buffer; and

restoring the data to the volatile read buffer when power returns.

11. (Previously Presented) The method of claim 10, wherein said restoring comprises:

accessing the nonvolatile memory to retrieve the read address associated with the read buffer; and

filling the read buffer with data from a memory array, beginning with data associated with the read address.

12 – 14. (Canceled)

15. (Currently Amended) A digital device that comprises:

a memory having a buffered memory interface with one or more read buffers;

and

a processor coupled to the memory device and configured to retrieve stored information from the memory,

~~wherein the processor causes~~ said processor being programmed to cause the memory to receive a power down command before electrical power is removed from the memory, ~~and wherein~~ and the buffered memory interface to responsively stores, in a nonvolatile memory, one or more addresses of memory locations that have been recently accessed.

16. (Original) The device of claim 15, wherein the memory interface is further configured to reload the one or more read buffers with data in accordance with information from the nonvolatile memory when power returns.

17. (Canceled)

18. (Previously Presented) The device of claim 15, wherein the one or more read buffers comprise:

a plurality of read buffers each associated with a different region of the memory and configured to buffer only a subset of data in the associated region for read operations on that region.

19. (Original) The device of claim 18, wherein the memory interface further comprises:

an interface control module that is configured to receive read commands specifying a memory address, wherein the interface control module is coupled to a nonvolatile memory array to conduct read operations to satisfy the read commands and to prepare read buffers to satisfy anticipated read commands; and

wherein the memory further comprises:

an error correction code (ECC) decoder coupled between the nonvolatile memory array and the one or more read buffers.

20. (New) A system for storing and retrieving data comprising:

means for receiving a read command that comprises a read address;

means for determining whether data from the read address is buffered in a volatile read buffer;

means for retrieving data from a location in a nonvolatile memory array associated with the read address if the data is not buffered, and buffering the retrieved data in the volatile read buffer;

means for responding to the read command with data from the volatile read buffers if the data is buffered;

means for detecting a pending power-down;

means for storing in nonvolatile memory the read address for data buffered in the volatile read buffer; and

means for restoring the data to the volatile read buffer when power returns.